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DRINKER BIDDLE & REATH (DC)  
1500 K STREET, N.W.  
SUITE 1100  
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EXAMINER
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LOPEZ, MICHELLE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MARKKU KESKINIVA, JORMA MAKI, MAURI ESKO,  
ERKKI AHOLA, AIMO HELIN, and TIMO MUUTTONEN

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Appeal 2010-000890  
Application 10/563,821  
Technology Center 3700

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Before KEN B. BARRETT, GAY ANN SPAHN, and MICHAEL C.  
ASTORINO, *Administrative Patent Judges*.

BARRETT, *Administrative Patent Judge*.

DECISION ON APPEAL

## STATEMENT OF THE CASE

Markku Keskiniva et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-33. An oral hearing was held on November 10, 2011. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

## THE INVENTION

Claim 1, reproduced below with emphasis added, is representative of the subject matter on appeal.

1. A pressure fluid operated impact device comprising a frame where to a tool is mountable movably in its longitudinal direction, control means for controlling pressure fluid feed of the impact device, and *means for generating a stress pulse in the tool by the pressure of a pressure fluid*, wherein

the impact device comprises a working chamber entirely filled with pressure fluid and, in the working chamber, a transmission piston movably mounted in the longitudinal direction of the tool with respect to the frame, an end of the transmission piston facing the tool coming into contact with the tool either directly or indirectly at least during the generation of the stress pulse, the transmission piston, in its axial direction with respect to the tool on the opposite side thereof, being provided with a pressure surface located towards the working chamber,

the impact device comprises energy charging means for charging energy of the pressure fluid to be fed to the impact device necessary for generating the stress pulse, and in that the control means are configured to allow periodically and alternately a pressure fluid having a pressure higher than the pressure of the pressure fluid present in the working chamber to flow to the working chamber, thus causing a sudden increase in the pressure in the working chamber and, consequently, a force pushing the transmission piston in the direction of the tool, compressing the tool in the longitudinal direction and thus

generating a stress pulse in the tool, the generation of the stress pulse ending substantially at the same time as the influence of the force on the tool ends, and, correspondingly, to discharge pressure fluid from the working chamber in order to enable the transmission piston to return to its substantially original position.

### THE REJECTIONS

The following Examiner's rejections are before us for review:

1. Claims 1-6, 13-14, 16-17, 19-21, 28-29, and 31-32 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ludvigson (US 4,102,408, iss. Jul. 25, 1978);
2. Claims 7-11 and 22-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ludvigson and Muuttonen (US 7,032,684 B2, iss. Apr. 25, 2006);
3. Claims 12, 18, 27, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ludvigson; and
4. Claims 15 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ludvigson and Keskiniva (US 7,252,154 B2, iss. Aug. 7, 2007).

### OPINION

Appellants contend that claim 1 calls for a device where "the force created by the pressure pulse compresses the tool and thus creates a stress pulse in it." App. Br. 5. According to Appellants, this is in contrast to Ludvigson's disclosure where "[t]he stress pulse to the pile is not created by setting piston 13 under the influence of pressure, but rather by hitting the

pile with the hammer.” *Id.* This characterization of Ludvigson is consistent with the Examiner’s position.

The Examiner’s finding of anticipation is based upon the determination that, in Ludvigson, the stress pulse is created by the impact of the piston against the tool. *See, e.g.*, Ans. 4 (“the impact contact between the piston and the tool is interpreted as the generation of stress impulse of the tool.”); *id.* at 9 (“such generation of stress pulse, as broadly claimed, is being interpreted by the Examiner, as the instant wherein the piston 13 impacts the tool 11.”) However, claim 1, with emphasis added, requires *inter alia* “means for generating a stress pulse in the tool *by the pressure of a pressure fluid.*” The Examiner does not adequately explain how Ludvigson discloses structure for generating a stress pulse via fluid pressure. As such, we cannot sustain the rejection of claim 1. Claim 19 recites “[a] method of generating a stress pulse in a pressure fluid operated impact device as claimed in claim 1,” and thus also requires a means for generating a stress pulse by fluid pressure. *See also* App. Br. 3 (Appellants noting that claim 19 depends from claim 1). The remaining claims subject to the anticipation rejection depend from either claim 1 or claim 19. We reverse the rejection of claims 1-6, 13-14, 16-17, 19-21, 28-29, and 31-32 as anticipated by Ludvigson.

The claims subject to the obviousness rejections are dependent claims. The Examiner’s articulation of those rejections and reliance upon the Muuttonen and Keskiniva references for the reasons stated do not cure the defects in the underlying anticipation rejection. Ans. 6-8. Accordingly, we

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also cannot sustain the rejection of claims 7-11 and 22-26 over Ludvigson and Muuttonen, the rejection of claims 12, 18, 27, and 33 over Ludvigson, or the rejection of claims 15 and 30 over Ludvigson and Keskiniva.

#### DECISION

The decision of the Examiner to reject claims 1-33 is reversed.

REVERSED

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